Eric Theiss suggested that while there are many positive actions on the table, he doesn't believe we would get anything accomplished to significantly benefit the species or enable recovery with what is currently proposed. He likes the proposed side-channel development and the potential for cooler water in the river from the Thermalito outlet but feels that upstream habitat needs to be utilized so the fish aren't forced to ~~fit in~~ squeeze into the available downstream habitat. He indicated an interest in moving fish up to Lake Almanor on the Feather River to relieve downstream water users of the need to provide cold water. He is also interested in investigating the creation of additional fish habitat in tributaries to the lower Feather River such as Glen Creek, secondary channel construction, and coordinated seasonal flow increases. He clarified that seasonal flow increases would be pulse flows aimed at cueing fish to move downstream. His top priority is investigating fish passage, followed by water temperature control at Thermalito Afterbay and secondary channel construction.

NOAA Passage PM&E

Eric Theiss presented a proposed resource action to move fish past Oroville and eventually to the upper watershed of the North Fork Feather River (see attachment 5). He suggested that if fish can be moved to federal lands ~~where they are already managed for~~, it would ~~relieve~~ reduce the ~~ESA agencies of the~~ regulatory burden of managing downstream areas for these species. He presented a map showing potential restoration habitat along Chipps Creek, Yellow Creek, East Branch and ~~Roberts~~ Robbers Creek. He estimates 136 miles of habitat above Oroville Dam could be accessed. Eric described the historic use of the habitat. Mike Meinz noted that the river around Big Bend Dam was dewatered in the 1850s for large-scale gold mining operations when a tunnel was built that blocked upstream passage. He added that Big Bend Dam was not laddered until the 1930s and there is no documentation that it worked well.

Eric noted that Oroville is too high for a ladder but a trap and truck system could be successful. He cited successful trap and truck operations to pass shad on the Susquehanna River as evidence that species sensitive to handling can be moved by this method. His proposal involves placing a small diversion dam and conventional collection device to capture the low flows on tributaries such as ~~on an upper arm of Lake Oroville on~~ the West Branch. This would involve ~~and~~ screening the intake at Miocene Dam. Eric See with DWR suggested they consider using Miocene as the collection point since the dam already exists. Eric Theiss provided photos of a gulper fish collection system on Baker Lake in Washington that includes a ¼-inch ~~Kevlar~~ net extending from the surface to the bottom of the lake and a barge to move fish past the dam. He ~~described a bioacoustics fish fence to be~~said it would be feasible to install~~ed~~ a net immediately, perhaps about a ½ mile below Big Bend Dam on the North Fork. Alternatively, a Bio-Acoustic Fish Fence could be tested, that would employ a bubble or acoustic curtain to repel fish and direct them for collection. He said NOAA would ask the Poe Project licensee to install a high gradient fish ladder on Big Bend Dam to allow passage of salmonids but not centrarchids. Eric See clarified that the proposal intends to truck adult salmonids into Lake Oroville but not truck them further upstream so a collection device would be needed on every tributary to Lake Oroville and a ladder at every dam above Oroville on the North Fork. Eric Theiss confirmed that intention and added NOAA's intention to request that the Poe Project licensee look at a high-speed screen such as a modular inclined plane screen or ~~Eiker~~ Eicher screen at Poe Dam. Steve Edmondson stated that NOAA would be petitioning FERC to re-open the Rock Creek-Cresta license and Eric Theiss added that with the licenses for 2107 and 2100~~0~~ open, we could bring fish up to Rock Creek-Cresta. Eventually, the goal is to move fish at least to Lake Almanor and potentially above however Eric noted that NOAA is not looking at moving fish above Lake Almanor at this time.

Eric Theiss clarified that the hatchery would be the collection point for spring run Chinook salmon and Anna Kastner noted that if this proposal were considered, an alternative water supply to the hatchery would be necessary. Eric See noted that the amount of water used by the hatchery is so great that no alternative source would be feasible. Mike Meinz noted that this proposal conflicts with other NOAA activities such as taking more cold water out of the West Branch and putting it into Butte Creek. He also pointed out that ~~Eiker~~ Eicher screens are not approved by DFG and noted that the Poe diversion is approximately 3,700 cfs, larger than the 2,000-cfs diversion screened by Glenn-Colusa Irrigation District at a cost of approximately $75 million. He suggested that the concept of restoring fish to historic habitat is positive but not likely to be feasible or possible here. Eric Theiss responded that the feasibility of these additional structures needs to be analyzed because the behavioral devices might prove to be so effective that screens are not necessary and suggested that the cost to the Poe Project licensee ~~would be about the same~~ is within the magnitude as the gross annual
revenue from the project.
Bill Cox suggested that the holding system would need to collect fish from the colder water within the water column and hold them only a short time and perhaps employ a chiller on the transport barges to decrease mortality during passage. Eric See asked if an alternative to screening upstream dams was to collect the fish at these dams and truck them downstream. Eric Theiss responded that was possible but NOAA did not want to make that choice at this time.
Eric See asked how NOAA measures recovery success and asked for clarification on the number of fish required to get to recovery. Eric Theiss replied that Dianne Windham with NOAA is trying to answer those questions and hopefully will have numbers for the Feather River in the next two to three years. Eric Theiss clarified that this proposed resource action is phased and begins with a feasibility study due in September with a test of the actual device in the spring of 2003. Steve Edmondson confirmed that the fish passage proposal is being submitted in support of the PM&E development process within the collaborative. Mike Meinz noted that as a proposed resource

action within this collaborative, the action should take place after a decision is made on a PM&E or resource action package. Steve Rothert noted that other proposed resource actions have additional information gathering associated with them and suggested this could be considered one of those.
The EWG discussed SP-F15 that extends to the first upstream migration barrier and Mike Melanson reminded the EWG that the scope ended at the first upstream barrier because DWR is only responsible for the area upstream to that point. Eric Theiss stated NOAA's interest in an evaluation of the entire watershed and added they intend to ask the Upper North Fork Feather River Project licensee to expand the scope of their evaluation. He indicated that DWR should consider blockage of downstream passage for juveniles and look at the habitat upstream to Almanor. He suggested DWR survey the area via helicopter to evaluate habitat similar to the efforts underway on the Yuba River. He stated NOAA's position that DWR has some responsibility for everything upstream of the Oroville Dam.
Nan Nalder representing the State Water Contractors asked for a copy of the NOAA presentation and noted that the watershed approach NOAA is suggesting would require FERC to order all of the licensees to participate and would involve a collaborative effort among those licensees. Eric Theiss responded that since several licenses are currently in some stage of relicensing, the timing is right to hold these discussions. Wayne Dyok offered that without the recovery numbers it will be very difficult to determine exactly what needs to be accomplished but Steve Edmondson noted that he has written hundreds of orders for ladders when he worked at the FERC and cited Butte Creek as an example of an action taken without a recovery plan. Wayne suggested that in other relicensings this has been a post-licensing process and an action item would be for DWR management to consider this approach and determine how to proceed. Steve Edmondson noted that he was completing the resource action information form for the NOAA fish passage proposal and the EWG could expect it in a week or so.